REMARKS

Claims 1-192 are pending in the present application, with claims 22-32, 72-165, 167, 170-176, 178 and 181-192 withdrawn in response to a restriction requirement. With entry of this Amendment, Applicants amend claims 1-7, 10-14, 33, 51, 62, 64, 166, 168, 169, 177, 179 and 180 and add new claims 193-195. Reexamination and reconsideration are respectfully requested.

Applicants note with appreciation that the Examiner has signed the Form 1449 filed with the application and listing five U.S. Patents. However, the Examiner has not initialed each citation on the Form 1449. Applicants respectfully request that the Examiner either initial each citation or include in the next Office Action a statement confirming that the Examiner has considered each of the listed U.S. Patents.

Applicants note with appreciation the indication of allowable subject matter with respect to claims 62 and 64. Applicants have placed claims 62 and 64 in independent form and respectfully submit that the claims are in condition for allowance.

Applicants note that the Examiner has not indicated the status of claim 63.

The Examiner rejected claims 1-19, 33-46, 49-58, 65-67, 70, 71, 166, 168, 169, 177, 179 and 180 under 35 U.S.C. § 102(b) as being anticipated by Hiyoshi et al. (US 5290964). Claims 20, 21, 47, 48, 59-61, 68 and 69 were rejected under 35 U.S.C. § 103(a) as being unpatentable in view of Hiyoshi. The rejections are respectfully traversed.

The present invention generally relates to apparatuses and methods for detecting motions of a performer to interactively control a performance of music or the like. In an embodiment, a control system comprises a receiver for receiving time-serial detection data from a motion detector. The control system comprises an analyzer for analyzing a time-varying waveform corresponding to the time-serial detection data and generates a plurality of kinds of characteristic parameters pertaining to a shape of the time-varying waveform. The plurality of kinds of characteristic parameters include peak value, peak-to-peak interval, etc. (see, e.g., specification at page 49, line 18

to page 50, line 4). The control system includes a controller for controlling a tone performance in accordance with the plurality of kinds of characteristic parameters.

In contrast, Hiyoshi fails to disclose analyzing "a time-varying waveform corresponding to the time-serial detection data" and generating "a plurality of kinds of characteristic parameters pertaining to the shape of the time-varying waveform" as recited in amended claim 1. Hiyoshi merely discloses at Col. 11, lines 32-64 approximately determining the peak time when the level of the acceleration signal reaches the peak level. There is no disclosure of analyzing a time-varying waveform corresponding to the time-serial detection data and generating a plurality of kinds of characteristic parameters pertaining to the shape of the time-varying waveform as recited in claim 1. Col. 16, line 26 to Col. 17, line 8 merely discloses converting acceleration data into a voltage waveform which, in turn, is compared to predetermined values Vr1 and Vr2 for conversion into a pulse wave. The pulse wave is converted into digital data and then into tone pitch data. Such data format conversion does not disclose or suggest the recited analysis and generation above. Accordingly, Applicants respectfully submit that claim 1 is not anticipated by or obvious in view of Hiyoshi.

Applicants have amended certain claims dependent on claim 1 in view of the amendment to claim 1. Applicants respectfully submit that claims 2-21 are not anticipated by or obvious in view of Hiyoshi for the reasons set forth above.

Applicants have amended claims 166 and 177 in a manner similar to claim 1. For the reasons set forth above, Applicants respectfully submit that these claims are not anticipated by or obvious in view of Hiyoshi.

An embodiment of the present invention can employ a three-dimensional sensor with x, y and z detection axes. Diversified performance control corresponding to the manipulations of the performance operator can be carried out by analyzing the three-dimensional movements of the motion sensor. For example, the acceleration in three directions can be compared to each other and, if the acceleration value in the z-direction is greater than the acceleration value in the x and y

directions, it is determined that the participant has performed a vertical thrust in the air (see, e.g., specification at page 61, line 8 to page 64, line 3). Once the type of operation is identified, a music performance piece can be controlled based on the type of operation.

Claim 33 has been amended to recite a receiver adapted to receive "detection data of a plurality of axial components" and a controller that "identifies a type of operation of said motion detector by comparing the detection data of the plurality of axial components and controls the performance on the basis of the identified type of operation."

In contrast, Hiyoshi does not disclose identifying a type of operation by comparing the detection data of the plurality of axial components. Hiyoshi discloses acceleration sensors 1X to 1Z with a circuit provided for each sensor (see Col. 21, lines 17-20 and 36-39). The output for each circuit can control a musical tone. For example, Col. 28, lines 26-37 discloses an embodiment in which the 1X sensor corresponds to the snare drum type and the 1Y sensor corresponds to the bass drum tone. However, Hiyoshi fails to disclose or suggest *comparing* the outputs of the sensors 1X an 1Y to identify a type of operation and then controlling the musical performance on the basis of the identified operation. Accordingly, Applicants respectfully submit that claim 33 is not anticipated by or obvious in view of Hiyoshi.

Applicants respectfully submit that claims 34-50, which depend from claim 33, are not anticipated by or obvious in view of Hiyoshi for the reasons set forth above with respect to claim 33.

Applicants have amended claims 168 and 179 in a manner similar to claim 33. For the reasons set forth above with respect to claim 33, Applicants respectfully submit that these claims are not anticipated by or obvious in view of Hiyoshi.

An embodiment of the present invention can employ of a plurality of motion detectors comprising master and subordinate detectors (see, e.g., specification at page 73, line 9 to page 77, line 2). The data from the master detector can include operation-type identifying data for controlling a performance in accordance with an operation mode designated on the basis of such data. Applicants have amended claim 51 to recite that the plurality of motion detectors comprises "master

and subordinate detectors" and that the "form of control, by said controller, is determined in accordance with an operation mode that is designated on the basis of operation-type identifying data included in the detection data transmitted by the master detector."

Hiyoshi merely discloses generating a tone on the basis of signals transmitted from a plurality of motion detectors. It does not disclose or suggest master and subordinate detectors and designating an operation mode of a controller in which a tone performance is controlled on the basis of identifying data included in the detection data from the master detector. Accordingly, Applicants respectfully submit that claim 51 is not anticipated by or obvious in view of Hiyoshi.

Applicants respectfully submit that claims 52-61, 63, 65-71 which depend from claim 51 are not anticipated by or obvious in view of Hiyoshi for the reasons set forth above with respect to claim 51. Applicants respectfully submit that new claims 193-195 which depend from claim 51 are also not anticipated by or obvious in view of Hiyoshi for the reasons set forth above with respect to claim 51.

Applicants have amended claims 169 and 180 in a manner similar to claim 51. For the reasons set forth above with respect to claim 51, Applicants respectfully submit that these claims are not anticipated by or obvious in view of Hiyoshi.

Applicants respectfully traverse the Examiner's statements regarding the motivation to modify Hiyoshi and the Official Notices cited in the § 103 rejections and, for the reasons set forth above, respectfully submit that claims 20, 21, 47, 48, 59-61, 68 and 69 are not obvious in view of Hiyoshi.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

If, for any reason, the Examiner finds the application other than in condition for allowance, Applicants request that the Examiner contact the undersigned attorney at the Los Angeles

telephone number (213) 892-5630 to discuss any steps necessary to place the application in condition for allowance.

In the unlikely event that the transmittal letter is separated from this document and the Patent Office determines that an extension and/or other relief is required, Applicants petition for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing docket no. 393032022200.

Dated: October 23, 2003

Respectfully submitted,

By_____

Mehran Arjomand
Registration No.: 48,231
MORRISON & FOERSTER LLP
555 West Fifth Street, Suite 3500
Los Angeles, California 90013
(213) 892-5630